Nuclear power: One person's view

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Dr. E. F. Schumacher, famous economist and promotor of the Intermediate Technology philosophy, states in his book, *Small is Beautiful,* that "of all the changes introduced by man into the household of nature, large-scale nuclear fission is undoubtedly the most dangerous and profound. As a result, ionizing radiation has become the most serious agent of pollution of the environment and the greatest threat to man's survival on earth." (p. 112)

Since 1974, at the first proposal of a nuclear power plant at Point Lepreau, New Brunswick, the Maritime Energy Coalition has been involved in various types of opposition to the plans of NBEPC and Premier Hatfield's Conservative government. From a small group of concerned citizens, the Coalition has expanded to encompass some 20-odd groups including church organizations, fisherman's - unions, anti-nuclear groups and related concerned citizens organizations. The Maritime Energy Coalition is part of the national Canadian Coalition for Nuclear Responsibility which has its center in Montreal.

The primary concern of the MEC has to do with the health and environmental impact of nuclear electrical generation. It has been shown over the years that the effects of radiation are hazardous to the health of any living organism. Dr. Helen Caldicott, native of Australia, through her research into the health effects of radiation, was instrumental in mobilizing that government to halt French atmospheric testing in the Pacific and in convincing unions to stop uranium mining. She now lives in the United States and has formed, with other concerned physicians, "Physicians for Social Responsibility". The group educates physicians and health care personnel about the dangers of nuclear radiation. Her paper, "Medical Implications of Nuclear Power" follows the dangers of this industry through the entire fuel chain from mining to waste storage. (See related article.)

N.G. Craik, an engineer with Canatom Inc., a company which designs and manufactures nuclear hardware for AECL, presented a brief to the Standing Committee on Energy of the New Brunswick Legislature entitled "The Philosophy of Energy Options." The arguments put forth in this essay embody the propaganda of the nuclear industry. At best it is weak and inhuman, but it serves as a starting point for my arguments against nuclear power.

Craik's first misleading statement deals with uranium mining. He states "the mining of uranium, like many other mining activities, is *fairly* hazardous but *probably* less hazardous that the underground mining of coal." Words like "fairly" and "probably" are not acceptable for rationale purposes when dealing with the real dangers of uranium mining and milling. When uranium is taken through these processes, radioactive radon gas and its daughters are emitted. At present, there are no controls on this cancer-causing pollutant and consequently radon is perhaps more dangerous than plant waste since the latter is at least kept in containment as best as is possible.

The brief does not deny that small amounts of "radioactive effluents" are emmitted during the normal operation of a plant but Craik justifies this by stating "that they are easily *measured* on a continuous basis." Simply because radia tion can be measured does not mean it is not dangerous. There is no threshold below which biological damage does not occur.

Dr. Ernest J. Sternglass, professor of radiation physics at the University of Pittsburg, has done numerous tests around nuclear plants to determine the effects of low-level radiation. He saw a connection between the rise in infant mortality rates in certain areas and the presence of nuclear plants in the vicinity. The plants were releasing low-level radioactivity to cause a statistical increase in infant deaths. He published the results in a book called *Low Level Radiation* in 1971.

In the fall of 1977, he found that children near two nuclear plants in Connecticut were (and are) receiving annual doses of strontium-90 through milk intake up to 241 per cent of the natural background levels. He found an excessive infant mortality rate after the start-up of the Millstone I nuclear plant (Haddam Neck, Conn.) in both Rhode Island and Connecticut, as compared to New Hampshire. In 1975, overall cancer death rates in Connecticut were higher in three towns within 30 miles of Millstone I.

Dr. Sterngalss's most recent survey was done in Pennsylvania. In a report entitled "Infant Mortality Changes Following the Three Mile Island Accident" he shows that the number of infant deaths rose by 32 per cent from February to July 1979. Breaking it down into smaller areas, a hospital in Pittsburgh (180m west) saw a 65 per cent increase and Harrisburg Hospital, with 35 per cent of the births in that area, saw an increase of *630 per cent*! The rate for the entire United States for that period of time showed a *decrease* of 10 per cent. Obviously, a foreign factor was at work in Pennsylvania.

Craik says of the Three Mile Island accident, "the actual release of radioactivity to the atmosphere during the TMI 'incident' (the nuclear industry avoids the word 'accident') was insignificant. It has been estimated that the 'incident' might cause perhaps one extra death due to cancer, in the large population of the area, a death which, if it did occur, would take place in many years to come."

It is this type of callous, irresponsible and inhuman attitude that is governing the nuclear industry in Canada! And it is this type of propaganda that is made public. He goes on to say that there was "plenty of time to consult various experts on how best to handle the hazard" at TMI. We now know through AEC reports that the plant came within 30 minutes of a fuel meltdown! They still are not sure of what went wrong or how to remedy it. The containment building is still sealed shut, filled with radioactive water and gases which must be released in small quantities to the atmosphere even now. The possibility of a meltdown still exists!

The Brookhaven Report (WASH-740) commissioned by the AEC in 1965 found such shocking statistics concerning a fuel meltdown that the AEC refused to issue the report and even denied its existence. Finally, in 1973 a Chicago lawyer threatened to sue the AEC under the Freedom of Information Act and made the report public. The impact is staggering. The estimates are based on a worst-case accident, that is, the radioactivity released through meltdown of half the fuel bundles, in a 200MW nuclear plant within 30 miles of a major city. The results: 45,000 people could be killed; 100,000 people could be injured and risk cancer in later years; $17 billion (1965 dollars) damage could be done; 150,000 square miles of land could be contaminated.

Craik asks: "Why should any design of reactor and its safety systems be considered acceptable when the probability of failure cannot be mathematically expressed as zero?" And he, answers: "The reason is that man must go on living." The evidence so far shows the nuclear energy path, contrary to this statement, has caused death and sickness without exeption.

One quotation from Craik's brief epitomizes the elitist attitudes of the nuclear industry:

§An argument against comparing the probability of a nuclear hazard occuring with the probability of a car accident or a plane crash, are that the latter hazards are free choice made by the individual, whereas the individual has not made a personal choice to live in a nuclear power environment. But what personal choices do we really have in life?

We did not choose to be born in North America or to be born at all. When we switch on a light, we do not make a personal choice to use hydroelectric power instead of nuclear power. We make a choice to enjoy the benefits of technology and to put our faith in those engineers who have developed and applied this technology in a responsible way. The opponents of nuclear power would like to avoid these commitments and beleive that they have the freedom to make other personal choices such as the so-called "soft" technologies or benign sources of power, of which solar power is one currently popular suggested alternative.

Although the odds are against us, I would like to think and believe that I have a choice as to the kind of environment I want to live in. And, I believe my choice of a non-nuclear future is justified on all accounts. It is not necessary in New Brunswick - it is simply serving to line the pockets of nuclear personel as the nuclear industry fades in importance all over the world. The citizens of New Brunswick and surrounding areas and the environment without which we cannot survive are being laid out on the line in the name of profit and prestige.

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